

---

# “Climate Tariffs” and the Credibility of the EU Climate and Energy Package

---

International Climate Policy and Carbon  
Leakage

---

Author

Susanne Dröge, German Institute for International and Security  
Affairs (SWP)

**WORKING PAPER**- February 25, 2009

---


Climate Strategies aims to assist government in solving the  
collective action problem of climate change. Sponsors include  
departments from European government and other stakeholders



[www.climatestrategies.org](http://www.climatestrategies.org)

**This Working Paper is part of the Climate Strategies Project "Tackling Leakage in a World of Unequal Carbon Prices Project"**

Author

Susanne Dröge	German Institute for International and Security Affairs (SWP)	
---------------	---	---

# "Climate Tariffs" and the Credibility of the EU Climate and Energy Package

## International Climate Policy and Carbon Leakage

---

### Table of Content

<b>Introduction .....</b>	<b>2</b>
<b>"Climate tariffs" against climate policy free riders .....</b>	<b>3</b>
A Burden for International Climate Negotiations.....	4
<b>"Carbon Leakage"—the Migration of Emissions Abroad.....</b>	<b>4</b>
Point of departure: Increased emissions costs .....	5
The energy-intensive industries in international competition.....	6
Limited understanding of the cost effects .....	6
Regional differences in the EU.....	7
<b>Possible measures against carbon leakage.....</b>	<b>7</b>
<b>No climate policy without trade policy? .....</b>	<b>9</b>

# Introduction

The French president Nicolas Sarkozy has repeatedly advocated strengthening the European climate and energy package by imposing tariffs on imports from world regions without an ambitious climate policy. Yet for a number of reasons, it remains ambiguous how trade-related policy instruments could contribute to the EU's climate strategy. Moreover, the EU faces the challenge of carbon leakage—the migration of emissions from the territory of the EU into non-EU regions through relocation of production and investment. This issue could come to the fore as the EU price on carbon emissions will increase following the current revision of the EU emissions trading scheme for the period after 2012. If the EU's climate policy should become a credible contribution to global carbon emissions reductions, the key issue is to deliver reductions within the EU territory. In order to reduce the relocation effects, carbon cost adjustments at the EU borders could in fact be applied to a small number of leakage-prone industries. At present, however, all attempts to bring this forward at the international level are being perceived by emerging economies as a threat. This in turn places at risk both the international negotiations on the future UN climate regime and the Doha Round negotiations on world trade.

There are two points of departure for the French idea of using import barriers in order to strengthen European climate strategy.

1. The EU's pioneering role in international climate policy: The European Union aims to bring forward climate protection at the international level. In order to prevent the Chinese from free-riding on the EU's efforts, the French president announced "climate tariffs" in 2007 to be enforced on Chinese products in the event that China would not commit to emission reductions under the UN Framework Convention on Climate Change (UNFCCC).
2. The revision of the EU emissions trading scheme (EU ETS): A newly drafted directive for the prolongation of the EU ETS was presented by the Commission in January 2008 as part of the EU's climate and energy package. This draft directive is subject to the legislative procedure in 2008. According to the proposal, the EU ETS will continue after 2012 in modified form. Several new features of the proposal will increase prices for emission allowances, resulting in additional costs for European industries.

In order to prevent firms and thus emissions from migrating to locations outside the EU, the Commission plans to allow trade-exposed, energy-intensive industries to gradually begin auctioning emission rights while continuing to receive a portion of the allowances for free—the exact amount of which still remains to be determined. Intro copy (Tahoma, 16pt). Dummy copy used aim to assist governments in solving the collective action problem of climate change. It connects leading applied research on international climate change issues to the policy process public debate, raising the quality and coherence of advice provided on policy formation.

# "Climate tariffs" against climate policy free riders

The idea of promoting national climate policy by imposing costs on outside suppliers' imports from countries without climate policy targets is not a new one. Trade policy tools were already introduced in the 1990s in a number of multilateral environmental agreements for the event that countries would not live up to their obligations to protect a global common. In particular, import sanctions were introduced under the Montreal Protocol as a means for the protection of the ozone layer (1987). This tool has never been applied, however. Given the EU's pioneering role in climate policy and the potential disadvantages that the EU may face in this area vis-à-vis large emerging economies, the French president threatened to introduce import tariffs against China in 2007—even before taking over the current EU presidency.

Developing countries regard such initiatives as "eco-protectionism"—a perception that was also common in the debates of the 1990s on trade policy and the environment. These fears are reinforced by the recently announced intention to use import tariffs against trade partners who do not live up to the climate policy targets set for industrial countries. If the general strategy of the EU's climate policy is to convince its large Asian and South American trade partners to take on new obligations and commitments, however, this approach will prove counterproductive in the arenas of both international climate policy and trade policy. Moreover, from a legal perspective, tariffs on goods from regions without climate policy are of limited applicability: the imposition of new tariffs runs fundamentally counter to WTO regulations, since the foremost aim of the world trade system is to abolish tariffs altogether. In order to protect a global common like the earth's atmosphere, WTO law does permit claiming exemptions under Article XX of the GATT. The most important legal criterion considered in such cases is that a foreseen measure cannot be carried out using other, less trade-distorting means. In the related Shrimp-Turtle dispute, the WTO dispute settlement body decided in 1998 that migrating turtles are a global resource and that shrimp trawlers are responsible for ensuring their protection. However, imposing import restrictions on the shrimp rather than taking other measures—such as furnishing the fishing boats with turtle excluding devices—distorts international trade and is thus unjustifiable.

Thus, if a production process that endangers the environment is used as justification for discriminating against a product at the border, first of all, it has to be demonstrated precisely that this procedure does indeed cause damage to the earth's atmosphere. Second, it must be shown that this damage can only be averted through trade restraints. Here, the argument that a country does not have a climate policy in place that is comparable to that of the importing country is not adequate. Rather, a serious effort must be made to seek alternatives, demonstrating credibly that there is no other possibility to protect the global resource in question.

Since climate protection in industry is achieved mainly with technological means, international trade law demands that the use of these means in the countries of origin should always be given priority. Current initiatives aimed, for example, at lifting tariffs on environmental goods and services under the WTO are based on the idea of accelerating technology transfers.

Against this backdrop, the threat of imposing "climate tariffs" stands on shaky ground. This is true in particular for tariffs aimed explicitly at particular countries (China, India) and perhaps not even directly related to production processes that harm the environment. For a given traded final product it is often no longer possible to determine which "dirty" processes were used during its production.

## A Burden for International Climate Negotiations

A central consideration is that the proposed trade restrictions designed to prevent free riding on climate policy by large emerging countries could jeopardize progress in international climate negotiations. The negotiation process is currently moving into a decisive phase. Up to the end of 2009, the negotiations over the United Nations' framework convention will lay the ground for a new global agreement that should take effect after 2012. It is of prime importance that growing economies whose greenhouse gas emissions are currently rising be involved in these efforts.

Yet the WTO negotiations have given these countries the impression that the liberalization of trade, particularly in agricultural goods, does not always work in their favor. As a result, they tend to see all trade measures for climate protection as threatening from the very outset. It will be crucial to reestablish mutual trust, and together with the exporters, to negotiate climate policy improvements in the area of emission-intensive industrial goods.

## "Carbon Leakage"—the Migration of Emissions Abroad

With the revision of the EU emissions trading scheme, the EU finds itself confronted with new challenges. One of these is the need to take action against undesired climate effects that result from the increasing price of emission allowances.

The "relocation" of emissions in reaction to national or regional environmental policies (carbon leakage) has become an issue since the industrialized countries signed the UN Kyoto Protocol (which entered into force in 2005). With that agreement, the signatories took on the obligation to reduce greenhouse gas emissions within their national boundaries. Important trade partners like China and India, however, do not have to comply with such reduction targets. Given the expected rising prices of EU emissions allowances, these countries' failure to take action on climate policy may provide them with an additional location advantage—another aspect of their free rider behavior.

If the EU and the German climate strategy were to directly or indirectly cause emissions to be "exported" abroad, this would not serve the interests of global climate protection. Rather, it would fundamentally call into question the effectiveness of the EU's efforts and thus the credibility of its climate policy. Since the EU has taken a pioneering role in environmental policy, it will be measured against its own standards and will be expected to show demonstrable emissions reductions within its own territory.

As long as there is no international CO<sub>2</sub> market in sight, the producers of carbon-intensive products will face the challenge of how the costs of CO<sub>2</sub> emissions will affect their international competitiveness. Even a breakthrough in the critical international UN

negotiations in Copenhagen in 2009 will not bring about a global CO<sub>2</sub> price. However, regional markets for tradable certificates are emerging in various countries. Australia and New Zealand will start an emissions trade system in 2009, and similar systems are in the planning stages or are already tested at the regional level in the US and Canada. All this will influence the conditions for the competitiveness of international firms.

The firms participating in the EU ETS will thus soon have to consider new cost differentials among different production locations and within markets. Whoever produces and exports in Europe will have to calculate additional emissions costs. For particularly emissions-intensive sectors, this will pose a problem, especially when the competition comes from countries where other production factors are more favorable, as well. One possible reaction to the EU climate policy would thus be for these firms to substitute imports for parts of production, or to relocate the full production process elsewhere. This would no doubt improve the emissions balance of the EU, but certainly would not bring about a global emissions reduction. At best, it could lead to a zero-sum game. Yet, since the EU sets fixed caps on the amount of emissions, the relocation of some firms abroad would create additional latitude for emissions by those that remain. However, a reduction of the cap in the case of carbon leakage is not part of the EU ETS directive.

## Point of departure: Increased emissions costs

The most important element of the EU emissions trading scheme after 2012 will be the auctioning of certificates (at least 60% on average). Up to now, this has only been done to a limited extent. The majority of allowances for emissions of greenhouse gases, mainly CO<sub>2</sub>, were allocated to industries—approximately 12,000 in the EU—at no cost. Furthermore, the number of emissions allowances is set to be cut by 1.74% per year.

Both auctioning and reductions in the amount of emissions allowances will increase the price of emission certificates. Firms have to pay for the allowances in each round of auctions. In case they do not have enough emissions certificates for their production at the end of the auctioning period, they will have to buy more on the certificate market to cover their excess emissions.

The potential for emission leakage will be determined by the firms' capability to absorb the additional carbon costs. This will in turn depend on whether they already have climate-friendly technologies that can be put into use relatively quickly, or whether they are able to pass on the costs to consumers—who would be impelled to change their behavior correspondingly as well. Both effects are desirable from a climate policy perspective. However, if neither of these options is available, reorienting production and investments will become decisive for the firms' competitiveness.

While substituting imports for domestic production may be an immediate response, investment decisions will be based mainly on expectations regarding future cost developments and demand trends. Moreover, the vertical integration of suppliers and buyers will also matter for any relocation of production. In order to assess the potential for carbon leakage, one needs several pieces of information: for example, an industry's profit margins and its ability to pass through costs—information that usually is sensitive and kept secret by the firms. Furthermore, estimates of future market opportunities and cost developments are needed.



Despite the relative lack of information—particularly at the level of the EU member states and within the relevant sectors in the EU—measures are currently under negotiation that would prevent or at least curb carbon leakage until a global market emerges that would bring about a convergence of emission prices.

## The energy-intensive industries in international competition

The EU emissions trading scheme is applied only to industrial firms. In several industrial sectors, energy needs are high and production processes are carbon-intensive. This is true, for example, of the manufacturing of cement, steel, refinery and chemical products. For these and some other sectors, full-scale auctioning may have a clear cost impact, both indirectly (via electricity prices) and directly.

When costs increase, the production and investment decisions of these firms will be influenced by the question of whether they can pass through CO<sub>2</sub> costs to consumers. If they face strong competition from producers from regions where CO<sub>2</sub> prices are low or zero, cost pass-through would lead to losses in sales, market shares, and profits.

However, if the firms have market power, the increased costs are added to prices. The free allocation of emission certificates since 2005 in the EU has shown that this also occurs when the certificates do not have to be bought in an auction (windfall profits were generated).

The list of the most severely affected energy-intensive industries in Europe that are exposed to international competition or face strong competitors on the borders of the EU emissions trade system (in Eastern and Southern Europe) breaks down differently depending on the CO<sub>2</sub> price applied. Along with the sectors suffering direct costs, such as the cement, lime, iron, and steel industries, this also includes sectors with high power consumption (e.g., aluminum production) and as a result, high indirect costs.

Until now, the EU Commission has not yet determined which sectors will be counted among those severely affected and thus likely to react by relocating abroad. This decision is to be made successively in 2010 and 2011. Currently, some member states (especially France and Germany) are pushing to include the criteria for compiling this list in the directive in 2008, and to draw up this list in spring of 2009 the latest.

## Limited understanding of the cost effects

The probable effects of higher carbon prices in the EU remain widely unknown. On the one hand, the energy-intensive sectors have argued that they will suffer major losses in competitiveness from increasing CO<sub>2</sub> prices and auctioning, because they—in contrast to the power producers—cannot pass through costs. A series of studies have shown that a price of 20 euros per ton of CO<sub>2</sub> would result in major cost impacts in some sectors. And in fact, this could soon be closer to the lower boundary of price levels under the EU ETS.

On the other hand, the EU Commission—with the concurrence of the European Parliament—wants to await the results of the international environmental negotiations in late 2009 before determining criteria or lists. Their belief is that progress in international agreements would decrease the potential for carbon leakage. Furthermore, they argue that if lists were compiled ahead of time, this could create confusing signals about the consistency of EU climate policy and EU expectations for the international regime.



Nothing will change, however, for those few sectors that are now the focus of the debate due to their particularly CO<sub>2</sub>-intensive production processes. In order to better estimate the potential for carbon leakage, the time available should be utilized to obtain a clearer understanding of this issue.

## Regional differences in the EU

Within the EU as well, industrial enterprises in the same sector are affected quite differently. Refineries in Great Britain have higher costs than those in East Germany because of their older technical equipment. In cement production, geographical proximity to the final consumer is crucial due particularly to transport costs. Shifting production with the aim of re-importing is currently paid, mainly in coastal areas. Future CO<sub>2</sub> prices could change this. The Spanish cement market is already being supplied from North Africa since transport across the Mediterranean Sea is relatively cheap. Electricity could in the longer run be exported to Poland from Belarus and the Ukraine, because the commitment of these countries to introduce carbon pricing is being regarded as unlikely.

# Possible measures against carbon leakage

As a possible measure against carbon leakage, the Commission proposes, (a) maintaining the free allocation of certificates up to 2012 and then decreasing allocations successively between 2013 and 2020. At the EU and global levels, however, other measures are being discussed, including: (b) sectoral agreements for the most carbon-intensive industries, (c) compensation of CO<sub>2</sub> costs arising for exporters, and (d) levelling the carbon costs for trading firms through border adjustment measures.

### Free allocation

The free allocation of emission certificates to firms was dominant in the first two phases of the ETS. The point of reference for allocations were past emissions (grandfathering). In order not to disadvantage new firms, an entry reserve was created. However, free allocation offered few incentives to reduce emissions. The price of certificates on the free market was low as too many allowances were handed out.

If free allowances allocation to particular firms should be continued in the future, incentives will also have to be created to reduce emissions. This can be achieved by capping allocations. In order to definitively determine the correct level of allocations, the final decision should be made at the end of the allocations period. Only then can it be stated how much a firm has actually produced. Still, firms will always be inclined to ex post present the highest possible production quantities and thus high emissions, if this determines their share of free allowances. But this would undermine plans to decrease emissions, particularly in the carbon-intensive industrial sectors, as allocation would be made dependent on the action that climate policy actually aims to deter. Furthermore, nothing would prevent firms from ultimately

deciding to close down production, cash in allowances and move abroad. Free allocation would thus not provide a means of tackling carbon leakage.

The Commission is considering the introduction of allocation benchmarks that could create an incentive to reduce CO<sub>2</sub>. Given that the Commission is waiting for the outcomes of the international negotiations, it is unlikely to decide before 2010 on the future amount of free allocation. It is also unlikely to determine the criteria (e.g., impacts on firm costs, trade intensity) at any earlier stage.

Keeping up the uncertainty of how to handle the allocation brings with it two disadvantages. Firms will not have any planning security up to 2010, and the basic question as to whether free allocations for all sectors offer the right climate policy incentives will remain open. Even the debate on the negative competitiveness effects of a CO<sub>2</sub> price for the "dirty" producers has itself revealed the high potential for lobbying, due not least to the very heterogeneous industrial structures in the individual EU member states.

#### International sectoral agreements

Another option is currently being discussed internationally as an alternative to a CO<sub>2</sub> price for energy-intensive firms: the idea that firms in these sectors agree on common production standards. However, it is subject to debate how such agreements would look like in detail, e.g. for the steel and cement industry, and especially how they could be put into practice. While many industry representatives argue for voluntary commitments, environmentalists and representatives of the industrialized countries (especially Japan) prefer more binding arrangements, led by governments. The concept includes that, for example, energy efficiency standards be implemented in all of the countries involved, giving their governments an important role to play both in the negotiations and in governing compliance. Although this would no doubt offer an effective solution to the global environmental problem, it is currently very unlikely to be implemented in a credible manner, as the governments of the emerging and developing countries have almost no means of enforcing such a plan. Many also consider the resulting costs too high for their producers. Furthermore, it is questionable what incentives producers would have to enter into agreements with their competitors on expensive standards when governments have no legal means of guaranteeing adherence to these standards. Thus, sectoral agreements are no short-term solution to avoiding carbon leakage.

#### State Aid—compensation for exporters

A third proposal for reducing costs and thus ensuring competitiveness of energy-intensive firms in the EU is to use the auctioning revenues to compensate firms for the costs of reinvestments and new investments. CO<sub>2</sub> cost subsidies would be legally problematic, however, since under the EC treaties, State Aid is subject to strict limitations and requires special authorizations. This solution would only be effective if all firms participated in auctioning. Then the cost pressure on trade-exposed sectors would be reduced through the reimbursement of proceeds. If direct compensation were implemented, further attention

would be needed to determine how dynamic incentives can be provided for more climate-friendly production.

### Border adjustment measures

Under the French EU Presidency, a discussion on border adjustment measures that was initiated by the Commission in 2007 has been taken up again. As with State Aid, these measures constitute an alternative to free allocation. All firms from the probably rather small group of sectors affected would participate in auctioning and buy certificates on the market as required. If they export their products, they could receive reimbursement at the border of the CO<sub>2</sub> costs. For example, in the case of steel from blast oxygen furnaces delivered to a region with low or zero CO<sub>2</sub> prices, the costs would be reimbursed. Vice versa, firms from these countries would need to buy the EU certificates when exporting to the EU or would pay a direct compensation. Here, it would be crucial that imports from plants with low-emission production be given preferable treatment—accordingly, the mechanism would need to rely on a basic emission standard, as with the sectoral agreements. The compensation would resemble the value added tax adjustment at the border, which functions according to the destination principle.

If at all, such mechanisms would only become relevant for those products that are homogeneous, that are at an early state of the value chain and that are considered CO<sub>2</sub>-intensive, like cement or steel products or other sectors, if the CO<sub>2</sub> price will soon increase dramatically. For final products (e.g., cars, electronic appliances), this procedure would not make sense, since the entire value chain needs to be taken into account in determining CO<sub>2</sub> contents—an undertaking that would not be manageable, neither from a technical, nor from a bureaucratic point of view.

From a climate policy point of view, it should also be taken into consideration that the indirect emissions from these sectors would have to play a role in how border adjustment measures are calculated. Steel produced in Brazil with electricity from hydropower should not be placed at a disadvantage to steel produced in China with electricity from coal. This criterion would, under certain conditions, place imports at an advantage over domestic products and thus meet with resistance from domestic industrial sectors—depending on their multinational activity. For this reason, and to ensure compatibility with WTO law, the concrete design of such an instrument should strive toward a multilateral approach that creates emission intensity standards, and above all, integrates all the trade partners. Unilateral border adjustment measures serve only to promote the protectionist tendencies, like those already expressed in the demand for "climate tariffs."

## No climate policy without trade policy?

Even if the use of trade instruments to achieve climate policy goals does not find majority support in the EU, these instruments will remain on the political agenda. An emissions trading scheme in the US will not be passed without some border adjustment measures. In the US, this decision will depend on the perceived threat from Chinese competitors. The current proposal for a cap-and-trade system (Lieberman-Warner-Boxer Bill) provides that importers

from countries without a climate policy "comparable" to that of the US will have to purchase emission allowances. It remains unclear if and how this concept will be put into practice and who will decide whether a country's climate policy is "comparable." Furthermore, the Senate proposal generously provides for offsetting the costs of certificates from other countries of origin and sources ("offset projects," e.g., from reforestation). After the presidential elections, the unilateral climate policy of the US will soon become more precise. The decision on trade policy measures under a cap and trade system will not so much depend on potential carbon leakage, but on "job leakage", and especially by aftermath of the 2008 financial crisis.

At the current state of play, in order to advance the international climate negotiations, no option should be excluded that promises an effective reduction of greenhouse gases—even if the effects of this option still remain unclear. This also means that a great deal of time still needs to be spent evaluating trade policy instruments as a means of effective climate policy—not least due to the potentially protectionist tendencies in the US. A clearer picture will not emerge, in any case, until 2009.

The European Union has a strong interest in achieving lasting credibility for its pioneering role in environmental policy, which until now has consisted mainly in announcing climate targets and measures. With the exception of France, there is currently no EU member state that has endorsed the use of trade policy instruments for climate protection. Nevertheless, the member states will face the issue of how the EU climate strategy can be equipped with foreign trade "safeguards" against countries that are not keeping pace with the EU's climate policy. Not least, because some trade partners will take this up. From 2009 on, Australia will join this discussion, and in the medium term, the EU will have to prepare for US efforts in this direction as well. Particularly if costs are to be offset at the EU border for a limited number of homogeneous products, the EU should talk to its trade partners at an early stage about multilateral approaches that would help to prevent the emergence of protectionist policies.

Title

"Climate tariffs" and the Credibility of the EU Climate and Energy Package: International Climate Policy and Carbon Leakage- Working Paper

Publisher

Climate Strategies 2008

For citation and reprints, please contact the publisher Climate Strategies

Climate Strategies

Climate Strategies aims to assist governments in solving the collective action problem of climate change. It connects leading applied research on international climate change issues to the policy process and to public debate, raising the quality and coherence of advice provided on policy formation.

Its programmes convene international groups of experts to provide rigorous, fact-based and independent assessment on international climate change policy.

To effectively communicate insights into climate change policy, Climate Strategies works with decision-makers in government and business, particularly, but not restricted to, the countries of the European Union and EU institutions.

Contact Details

Managing Director: Jon Price  
Climate Strategies  
c/o University of Cambridge  
13-14 Trumpington Street  
Cambridge, CB2 1QA, UK  
Office: +44 (0) 1223 748812  
[Jon.price@climatestrategies.org](mailto:Jon.price@climatestrategies.org)  
[www.climatestrategies.org](http://www.climatestrategies.org)

Climate Strategies is grateful for funding from their core supporters including The Carbon Trust (our founding supporter) governments of UK (DEFRA, OCC, DFID), France (ADEME with inputs from French Ministry of Finance), Grant Thornton, European Climate Foundation and the Swedish Energy Agency.